

STATUS OF THE CLAIMS

The following is a listing of claims that replaces all prior versions, and listings, of claims in the application:

1-5. (Canceled)

6. (Withdrawn) A method, comprising:

- a) providing:
 - i) a patient implanted with a device, wherein said device comprises;
 - 1) a implantable pacemaker element; and
 - 2) a plurality of atrial and ventricular pacing leads connected to said pacemaker element, wherein said pacing leads are configured for simultaneous activation and coursing to the ventricles and atria; and
 - ii) a plurality of sensing leads connected to said pacemaker coursing to the ventricles and atria;
- b) initiating one or more pacing bursts by said pacemaker element, wherein said ventricles and atria are simultaneously paced; and
- c) detecting an earliest arriving electrical signal following termination of said pacing bursts.

7. (Withdrawn) The method of Claim 6, wherein prior to step b) a cardiac arrhythmia is detected in said patient.

8. (Withdrawn) The method of Claim 6, wherein said earliest arriving electrical signal is from the ventricles.

9. (Withdrawn) The method of Claim 6, wherein said earliest arriving electrical signal is from the atria.

10. (Withdrawn) The method of Claim 6, further comprising step d) defibrillating said ventricles under conditions such that normal sinus rhythm is restored.

11-26. (Canceled)

27. (Currently Amended) A device, comprising:

- a) an implantable pacemaker further comprising ~~a plurality of~~ an atrial lead and a ventricular lead[s], said atrial lead and said ventricular lead[s] further comprising distal tip electrodes configured to deliver simultaneous anti-tachycardia pacing bursts ~~to the atria and ventricles~~ and detect an earliest arriving electrical signal following a blanking period resulting from said pacing bursts;
- b) an implantable cardiac defibrillator attached to said pacemaker; and
- c) a timing device connected to said pacemaker, said timing device configured to identify the origin of an arrhythmia by ~~determine if said earliest arriving electrical signal originated from the atria or the ventricles~~ by determining if said earliest arriving electrical signal was detected by said atrial lead distal tip electrode[s] or said ventricular lead distal tip electrode[s].

28. (Previously Presented) The device of Claim 27, wherein said pacemaker further comprises a microprocessor configured to initiate said pacing burst.

29. (Previously Presented) The device of Claim 27, wherein said pacemaker generates said anti-tachycardia pacing burst.

30. (Canceled)

31. (Currently Amended) The device of Claim 27, wherein said atrial lead and said ventricular lead[s] further comprise defibrillation electrodes.

32. (Canceled)

33. (Previously Presented) The device of Claim 27, wherein said pacemaker further comprises a storage memory connected to said atrial and ventricular leads.

34. (Previously Presented) The device of Claim 31, wherein at least one of said defibrillation electrodes is configured to convert an abnormal heart rhythm into normal sinus rhythm.

35. (Currently Amended) The device of Claim 27, wherein said atrial lead and said ventricular lead[s] are quadripolar.

36. (Currently Amended) The method of claim 27, wherein said atrial lead and said ventricular lead[s] further comprise separate conductors.

37. (New) A device, comprising:

- a) an implantable pacemaker further comprising at least one atrial lead and at least one ventricular lead, said at least one atrial lead and said at least one ventricular lead further comprising distal tip electrodes configured to deliver simultaneous anti-tachycardia pacing bursts and detect an earliest arriving electrical signal following a blanking period resulting from said pacing bursts;
- b) an implantable cardiac defibrillator attached to said pacemaker; and
- c) a timing device connected to said pacemaker, said timing device configured to identify the origin of an arrhythmia by determining if said earliest arriving electrical signal was detected by said at least one atrial lead distal tip electrode or said at least one ventricular lead distal tip electrode.

38. (New) The device of Claim 37, wherein said pacemaker further comprises a microprocessor configured to initiate said pacing burst.

39. (New) The device of Claim 37, wherein said pacemaker generates said anti-tachycardia pacing burst.

40. (New) The device of Claim 37, wherein said at least one atrial lead and said at least one ventricular lead further comprise defibrillation electrodes.

41. (New) The device of Claim 37, wherein said pacemaker further comprises a storage memory connected to said atrial and ventricular leads.

42. (New) The device of Claim 40, wherein at least one of said defibrillation electrodes is configured to convert an abnormal heart rhythm into normal sinus rhythm.

43. (New) The device of Claim 37, wherein said at least one atrial lead and said at least one ventricular lead are quadripolar.

44. (New) The method of claim 37, wherein said at least one atrial lead and said at least one ventricular lead further comprise separate conductors.